Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	IB Docket No. 95-117
Streamlining the Commission's	)	
Rules and Regulations for Satellite	)	
Application and Licensing Procedures	)	

REPORT AND ORDER

Adopted: October 29, 1996 Released: December 16, 1996

By the Commission:

TABLE OF CONTENTS

I. INTRODUCTION

1. With this Report and Order, we adopt streamlined application and licensing procedures and requirements for satellite space and earth stations under Part 25 of our rules. Our action is part of our continuing effort to review and revise, as necessary, the rules governing satellite communications services. The new rules follow basic goals of Commission regulation in a dynamic telecommunications market to: eliminate outdated and cumbersome regulations, reduce unnecessary paperwork, and increase efficiency. None of the changes in this proceeding to the requirements for satellite space and earth stations under Part 25 will increase the potential for interference or adversely affect coordination with terrestrial licensees.

2. Streamlined regulation will help the U.S. satellite industry to continue to expand and compete in the world-wide telecommunications market. The revised rules we adopt today free satellite service providers from unnecessary regulatory burdens, and, enable them to respond more quickly to customers' needs. We waive the construction permit requirement for space stations and relax the rules governing space station licensee reports. We also simplify license renewal rules for temporary fixed earth stations and Very Small Aperture Terminal ("VSAT") earth stations.

3. In 1994, the International Bureau held a series of roundtable discussions with industry and the public to solicit ideas for streamlining satellite licensing. The Bureau

received and quickly implemented many excellent recommendations.[1] More substantial recommendations could not be implemented without a Commission rulemaking proceeding. Accordingly, we incorporated them in our August 1995, Notice of Proposed Rulemaking ("Notice").[2]

4. A cross-section of satellite industry members filed comments and reply comments in response to this Notice. Generally, commenters strongly support the proposals set forth in the Notice. Several commenters suggested minor clarifications and refinements of some of our proposals, as well as additional changes. We address these below.

DISCUSSION

A. Space Stations

5. Since the late 1980's when we last modified our rules governing space stations, satellite technology has continued to evolve. In our Notice, we proposed a number of changes to make our licensing process more efficient and responsive.

1. Waiving the Construction Permit Requirement

6. Section 25.113 requires entities to apply for and receive a permit prior to beginning construction of a space station. In our Notice, we proposed to waive this requirement, so companies can begin constructing space stations before receiving a license to operate. We stated that waiving the requirement would provide applicants with increased flexibility in their long-term planning and delivery of services. We also stated that because the process of constructing and obtaining a license for a new satellite often takes years waiving the construction permit requirement would allow new services to be delivered to the public as quickly as possible upon completion of the licensing process. In proposing this policy change, we recognized that it would eliminate the need for applicants to request

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[1] For example, the Bureau: (a) adopted a grant-stamp approval procedure for unopposed routine requests for special temporary authority that comply with the requisite rules and are in the public interest, convenience, and necessity; (b) eliminated the redundant filing of Radiation Hazard Studies under Part 25 of our Rules by earth station applicants and licensees; (c) reviewed and granted 173 earth station renewal applications, clearing the way for continued delivery of video programming, data transmission and teleconferencing services; (d) authorized status conferences to be called upon request and, consistent with our *ex parte* rules, in cases where the Bureau has not acted on an application within six months of filing; and (e) sponsored, in conjunction with the International Telecommunication Union, a seminar on major radiocommunication satellite coordination matters.

[2] Streamlining the Commission's Rules and Regulations for Satellite Application and Licensing Procedures, 10 F.C.C. Rcd.10624 (1995) ("Notice").

waivers under Section 319(d) of the Communications Act.[3] A Section 319(d) waiver allows an applicant to begin construction at its own risk without a construction permit and prior to obtaining a license. In the Notice, we noted that some potential applicants have come to view the grant of a Section 319(d) waiver as an implicit grant of a license. However, while waiving the construction permit requirement for space stations would allow potential applicants to construct their satellites prior to receiving a license, we emphasized that an applicant's decision to proceed with construction and incur expenses associated with construction would be taken at its own risk and not predispose us to grant its future application. We also proposed that, prior to construction, applicants must notify us in writing that they are beginning construction at their own risk.

7. An overwhelming majority of the commenters concurred with this proposal. Some urged that we require applicants to submit an underlying application before they can begin construction.[4] Other commenters suggested that we issue a public notice indicating that construction has begun.[5] Motorola Satellite Communications, Inc. ("Motorola") suggested that we also permit experimental satellite (Part 5) and mobile satellite service (Part 25), ("MSS") license applicants to begin construction upon filing an experimental license application. Loral Qualcomm Partnership, L.P. ("LQP"), in contrast, urged us to defer action on waiver of the construction permit requirement until we undertake a more comprehensive review of satellite licensing policies and procedures.[6]

8. We believe that waiving the construction permit requirement for space stations will accelerate the provision of satellite-delivered services. Eliminating this requirement will diminish the administrative burdens on applicants and the potential delays associated with the processing of construction permit applications and requests for Section 319(d) waivers. However, we will not, in this proceeding, address Motorola's request that we extend our proposal to waive the construction permit requirement for applicants who seek experimental licenses. The Office of Engineering and Technology expects to initiate a rulemaking to address issues concerning construction permits and experimental authorizations under Part 5

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[3] Section 319(d) of the 1934 Communications Act authorizes the Commission to waive the requirement for construction permits for any station or class of stations (other than broadcasting stations) if we determine that the public interest, convenience, and necessity would be served. We have routinely granted 319 (d) waivers of the construction permit requirement. In fact, the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996) amends Section 319(d) to extend the Commission's waiver authority to broadcasting station facilities should this be found to be in the public interest, convenience or necessity.

[4] See e.g., Comments of AT&T Corporation at 2; Comments of GE American Communications, Inc. at 3; Comments of Hughes Communications Galaxy, Inc. at 2.

[5] See Reply Comments of CTA Incorporated at 5.

[6] Comments of LQP at p. 3.

of our rules. We encourage Motorola to participate in that proceeding. Furthermore, we see no reason to delay implementation of this policy, as LQP suggests.[7]

9. We underscore again that any construction will be at the applicant's own risk, and we will not in any way consider the status of construction or expenditures made when acting on the underlying application. Consequently, we will adopt our proposal to require applicants to notify us in writing that they plan to begin construction at their own risk. We do not believe it is necessary to require a potential applicant to submit an underlying application before it can begin construction. Since construction is solely at the applicant's own risk that its application will not be granted or will be granted only with certain technical modifications, and we would not review the application as a prerequisite to allowing construction to begin, we see no reason to delay construction until an application has been filed. GE American Communications, Inc. ("GE Americom")[8] suggested that we issue a public notice indicating that construction has begun. As this information is not relevant to the Commission's action on the underlying application or essential in furthering the public interest, we will not adopt a public notice concerning construction of space stations.

2. Eliminating Other Space Station Application Requirements

10. In our Notice, we proposed to eliminate a number of unnecessary or redundant requirements for space station applications. First, we proposed to eliminate the requirements that applicants submit a "detailed statement of estimated investment and operating costs for the expected lifetime of the facility" and "[e]stimated annual revenue requirements."[9] We noted that we do not use this information when evaluating an applicant's financial qualifications. Rather, our assessment is based on information required by other rules.[10] Therefore, requiring similar information concerning investment and operating costs and expected revenue requirements is unnecessary. Because the projections we required are typically considered sensitive business information, there have been many legal battles about whether those projections should be treated as confidential under the Commission's rules and relevant statutes.[11] Eliminating this requirement will reduce the number of petitions for confidentiality filed by applicants concerned about sensitive business information becoming public and will reduce the administrative burden on the Commission staff. The commenters agreed that Section 25.114(c)(17) should be deleted. We therefore eliminate this rule section.

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[7] Id. at p. 4.

[8] Comments of GE Americom at p. 6.

[9] 47 C.F.R. §§ 25.140(c) and 25.114(c)(17).

[10] 47 C.F.R. §§ 25.114 and 25.140.

[11] See 47 C.F.R. § 0.457.

11. We also proposed to eliminate the following requirements in Section 25.114(c). First, in Section 25.114(c)(8)[12] we suggested dropping the requirement that an applicant submit projections of the number and geographic distribution of earth stations and the proposed arrangements for access to the satellite system. Second, we proposed to streamline Section 25.114(c)(9) by deleting data related to the demand for services, entities to be served, and estimated transponder capacity under each of the proposed operating conditions. Third, we proposed deletion of Section 25.114 (c)(12), which requires an applicant to file information on launch vehicles and arrangements for procuring launch services. Fourth, we would no longer require the information set out in Section 25.114(c)(16) concerning historical use of existing satellites on a year-by-year basis, as well as Section 25.114(c)(15) which requests ancillary information concerning the satellite's capability to provide service to Alaska, Hawaii, and/or Puerto Rico/Virgin Islands.[13] We noted that none of this information is necessary in determining whether grant of a space station license would serve the public interest. The commenters expressed support for these proposals. LQP recommended that we eliminate Section 25.143(e)(iii) of the rules governing 1.6/2.4 GHz MSS service.[14] We disagree. Section 25.143(e)(iii) requires licensees in the 1.6/2.4 GHz MSS service to file information regarding system utilization in annual reports. This reporting requirement is similar to that required for other space station licensees, included in Sections 25.210 (j) and 25.142(c)(2) of our rules. This information allows us to monitor the extent to which the orbit spectrum/resource is being used and does not impose an undue burden on licensees. Thus, we will retain Section 25. 143(e)(iii).

3. Clarifying Existing Rules

12. We received unanimous support from commenters regarding the following rule clarifications designed to provide applicants with greater guidance and direction. First, we proposed to amend Section 25.114(a) to allow applicants to submit one consolidated system proposal containing information common to all space stations, instead of a separate application for each satellite. This proposal will eliminate paperwork and alleviate any unnecessary burden on applicants proposing multiple space stations within a single satellite system.

13. Second, we proposed to narrow Section 25.114(c)(10) by specifying that the requested information on orbit characteristics applies only to satellites in geostationary-

[12] Section 25.114(c)(8) requires that an applicant submit the estimated number and geographic distribution of earth stations and describe the proposed arrangements for access to the systems between the premises of the users and the earth stations for domestic satellites.

[13] Section 25.114(c)(9) requests this information.

[14] Comments of LQP at p. 7.

satellite orbit.[15] Last, we addressed the issues of mutual exclusivity, comparative consideration, and "cut-off" dates raised in Section 25.155(b)(2). Under Section 25.155(b)(2), an application that is acceptable for filing and mutually exclusive with another application is entitled to comparative consideration if it is received before the "cut-off" date specified in the public notice. In cases where no "cut-off" date is specified, it must be received within thirty days after the date of the public notice listing the first of the conflicting applications. We proposed amending Section 25.155(b) because, at times, it may create confusion regarding whether a "cut-off" date has been triggered. The comments confirm this. All parties support our proposal that a "cut-off" period should not be triggered, except if specified through a public notice. Consequently, we adopt our proposed rule, and will announce cut-off dates through a public notice in advance of granting a space station license. Motorola urges us to clarify that we will not routinely subject satellite applicants to multiple "cut-off" dates by reopening closed cut-offs.[16] It asserts that reopening a cut-off would be unfair to those applicants who invest substantial time and money developing new satellite services. We emphasize that our general policy is to limit consideration to applicants filing by the original cut-off date.[17] There may be circumstances, however, where it may serve the public interest to re-open a cut-off, and we reserve the right to do so in these cases.

4. Reducing Reporting Requirements for Space Stations in the Fixed Satellite Service

14. In the past, we have required all FSS space station operators to file a semi-annual report with the International Bureau and the Commission's Laurel, Maryland, field office[18] containing specific information regarding construction progress and traffic on in-orbit satellites as outlined in Sections 25.210(j)(1), (j)(2), (j)(3), and (j)(4). In the Notice, we proposed to require that this report be submitted only on an annual basis, by June 30th of each year. All commenters agreed with this proposal. MCI Telecommunications Corporation ("MCI") suggests that, in an effort to ensure that the information is as timely as possible, we require all information to be current through March 30th of each year. We agree that the report should be based on current information. We believe, however, that one month is sufficient time for licensees to prepare the report, especially in light of the information requirements we eliminate below. Accordingly, we will require each report to be current as

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[15] A satellite operating in geostationary-satellite orbit has a period of revolution equal to the period of rotation of the earth about its axis and a circular and direct orbit which lies in the plane of the earth's equator.

[16] See Comments of Motorola at p. 8.

[17] See Petition of PanAmSat Licensee Corporation to Reopen the Ka-Band Satellite Application Processing Round, Order, 11 F.C.C. Rcd. 5627 (1996) (denying PanAmSat's request to reopen the processing round to satellite applications.)

[18] Please note that the Columbia Operations Center in Columbia, Maryland, has replaced the Commission's Laurel, Maryland field office. See FCC Closes Baltimore Field Office, Public Notice (June 16, 1995).

of May 31st of the report year it is submitted.

15. The Notice proposed eliminating certain requirements to provide information in the satellite report. Currently, Section 25.210(j)(3) requires the operator to provide a detailed description of how each transponder is used. This includes information as to whether the transponder is used for preemptible or occasional services, the nature of these services, and the amount of time preemptible or occasional services are provided over the transponder. We proposed instead to require an operator to describe only how each transponder is being used, to identify the total capacity or percentage of time each transponder is actually used for transmission, and to identify the amount of unused capacity on the transponder. Comments on this proposal were again favorable. Hughes Communications Galaxy, Inc. ("HCG") argues that our proposal should go further and eliminate the "use" requirement for transponders that are sold.[19] We acknowledge that once transponders are sold, the satellite operator may not have specific information regarding transponder usage. Our intent in retaining the "use" reporting requirement is to determine whether scarce spectrum resources are, in fact, being used and the sale of a transponder is a clear indication of use. Accordingly, we see no reason to require satellite operators to submit this information regarding transponders they do not own. Therefore, we modify the rule accordingly.

5. Eliminating Application Requirements for Inclined Orbit Operations

16. Currently, we require licensees seeking authority to operate a geostationary satellite in an inclined orbit to file an application to do so.[20] In the Notice, we proposed to add a new Section 25.280 to our rules, to permit a licensee to operate a geostationary satellite in an inclined orbit provided that it notifies us within 30 days after the commencement of inclined orbit operation. There were several reasons for this proposal. First, when the Commission initially authorized satellites to operate in inclined orbit in 1989, we were concerned about potential interference to geostationary satellites that do not operate in inclined orbits. This has not proven to be a problem.

17. No commenter disagrees with our proposal, but several offer suggestions concerning the notification process. HCG and GE Americom asked us to provide public notice of letters of notification that a satellite has been put into inclined orbit.[21] We agree that public notice of these letters will serve to alert other operators that the orbit has been

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[19] Comments of HCG at p. 4.

[20] A geostationary satellite is said to operate in inclined orbit when it maintains its original east-west but not its north-south stationkeeping . Therefore, a geostationary satellite in inclined orbit will drift to the north and south of its original orbital location with respect to the equatorial plane.

[21] See Comments of HCG at p. 4; Comments of GE Americom at p. 6.

modified, without adding a regulatory burden. We also agree with GE Americom that the notification letter should identify the satellite operator.

18. We recognize that operating in an inclined orbit may extend the satellite's service life by several years. PanAmSat Corporation ("PanAmSat") claims that the new rule will allow operators with aging satellites to hold onto scare orbital slots that could be used more efficiently by new, state-of-the-art space stations.[22] We do not intend to allow older satellites operating past their ten-year license term to impede the introduction of new satellite technology. Accordingly, we will continue to rely on a full examination of data and statistical information when reviewing any license extension request to ensure that the licensee operating in an inclined orbit is not impeding the introduction of new satellite technology and the efficient use of the orbit-spectrum resource. Further, we will consider orbit locations occupied by satellites past their original license terms as being potentially available for reassignment to a new state-of-the-art satellite.[23]

19. As Comsearch noted,[24] coordination of operational changes promotes efficient spectrum use and prevents undesirable interference. To this end, we affirm that earth station licensees operating with satellites in inclined orbits in the 4/6 GHz band must update their frequency coordination as necessary in accordance with Sections 25.203 and 25.251. Moreover, the intent of our rule, as MCI correctly states,[25] is for earth station operators to complete frequency coordination agreements prior to using an inclined orbit for satellite operations.

20. Home Box Office ("HBO") requested that we consider three specific modifications to our proposed Section 25.280 concerning inclined orbit authorizations.[26] These were 1) requiring a 30-day prior notification, 2) clarifying that operation in inclined orbit does not extend the spacecraft's license term, and 3) requiring four specific conditions for operating in the inclined orbit mode. Under the four conditions suggested by HBO, a licensee would be required to: (1) periodically correct the satellite altitude to achieve a stationary spacecraft antenna pattern on the surface of the Earth and centered on the satellite's designated service area; (2) control all interference to adjacent satellites, as a result of operating in an inclined orbit, to levels not to exceed that which would be caused by the

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[22] Comments of PanAmSat at p. 5-6.

[23] See Licensing of Space Stations in the Domestic Fixed-Satellite Service, FCC No. 85-395, CC Docket No. 85-135, 50 Fed. Reg. 36071 (released August 29, 1985) ("1985 Report and Order").

[24] Comments of Comsearch at p. 3.

[25] Comments of MCI at p. 2.

[26] Comments of HBO at p. 4.

satellite network operating without an inclined orbit; (3) not claim protection in excess of the protection that would be received by the satellite network operating without an inclined orbit; and (4) continue to maintain the space station at the authorized longitude orbital location in the geostationary satellite arc with the appropriate east-west station-keeping tolerance.

21. We agree with several of HBO's suggestions. To provide applicants and licensees with appropriate notice, we make clear that commencement of inclined orbit operations does not extend the spacecraft's license term. Further, we modify the proposed rule to incorporate the four specific operating conditions HBO recommends to promote interference-free operations. However, we find that imposition of a prior notification requirement for commencement of inclined orbit operations, as HBO suggests, would unnecessarily reduce operational flexibility and would provide no clear public interest benefit. Thus, we reject HBO's contention that prior notification is needed. Our requirement that licensees notify us within thirty-days of commencing inclined orbit operations coupled with our issuance of a public notice following receipt of such notification is sufficient to alert affected parties.

6. Operating Beyond the License Term

22. In a related matter, AT&T Corporation ("AT&T") proposes that we specify that we will grant satellite license renewals for a period of at least two years, given that the design life for today's geostationary satellite is often in excess of twelve years.[27] The Commission already has the discretion to grant a license renewal for any period which allows the Commission the flexibility necessary to address each individual case. This would not be possible if the Commission adopted the AT&T proposal. Thus, in cases where we deem two years or any other amount of time to be an appropriate extension, we can do so.

B. Earth Stations

1. Waiving the Construction Permit Requirement

23. Motorola requested that we expand the construction permit waiver to incorporate MSS earth stations.[28] We will adopt Motorola's suggestion to waive the construction permit requirement for MSS earth stations. We waived the construction permit for fixed satellite service (FSS) earth stations in 1988, when we last revised our Part 25 rules. Given the recent initiation of MSS in the United States and the licensing of several other companies who will be providing service shortly, we see no reason to continue to treat MSS earth stations

[27] Comments of AT&T at p. 8. The standard license term is ten years unless the Commission deems otherwise. We believe it is important to retain such discretion for use in appropriate cases.

[28] Comments of Motorola at p. 4.

differently than FSS earth stations. Consequently, we will permit MSS earth station applicants to construct both gateway and user earth stations at their own risk prior to receiving a license. We caution that earth stations constructed prior to licensing for operation with foreign satellites will be subject to requirements that may be adopted in our pending DISCO II proceeding.[29]

2. License Renewal Term for C-band Transportables

24. In our Notice, we proposed increasing the license term for temporary fixed earth stations[30] (also referred to as transportables) operating in the C-band (4/6 GHz) from one year to ten years.[31] Unlike traditional C-band fixed stations, which remain at the same location and for which license applicants must submit a comprehensive interference analysis, transportables are generally set-up quickly in various locations to cover news stories or other time-sensitive events. Rather than requiring transportable operators to submit a coordination analysis, we require them to notify the licensees of all terrestrial stations operating in the same frequency band within the coordination contours of the proposed transportable site. The transportable stations are authorized to begin transmissions only after earth station operators confirm that unacceptable interference will not be caused to terrestrial stations.[32] We noted that most, if not all, parties providing transportable services in the C-band provide service for more than one year. We also noted that the notification process has worked well, suggesting that the one-year license term restriction may no longer be necessary. We noted that increasing the license term would allow applicants to engage in long-term business planning, reduce the administrative burden associated with processing license renewals, and reduce the regulatory burden on licensees.

25. There was no objection to this licensing change by any of the commenters, nor did commenters object to our proposal that C-band transportable operators notify the Commission of their operations through the Director of the Commission's Columbia Operations Center rather than the voluntary notification made to the Engineers-in-Charge (EIC) in the Commission's field office of the Compliance and Information Bureau. However, MCI indicated that in order to provide potentially affected terrestrial licensees as much time as possible to anticipate potential interference problems, we should require C-band

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[29] See Amendment of the Commission's Regulatory Policies to Allow Non-U.S.-Licensed Space Stations to Provide Domestic and International Satellite Service in the United States, Notice of Proposed Rulemaking, FCC 96-210, IB Docket No. 96-111, (released May 14, 1996).

[30] Temporary fixed earth stations operate from stationary positions but are not fixed to one particular location and can be relocated easily (e.g., a satellite news-gathering vehicle).

[31] Notice at ¶¶ 17 and 18.

[32] 47 C.F.R.§ 25.277(c)-(e).

transportable operators to provide prompt notice to the Commission and to terrestrial licensees that they will offer service.[33] We do not believe this is necessary. We already require C-band transportable operators to coordinate their activities with terrestrial facilities in accordance with Section 25.277 of our rules. Transportable operators may begin transmissions only after they have notified terrestrial operators and have confirmed that they will not cause unacceptable interference to these operators. It is in the transportable operators best interest to provide notice as quickly as possible. Moreover, we have no record of problems in this area.

2. Licensing Provisions for Very Small Aperture Terminal (VSAT) Networks

26. We proposed to revise our licensing policies and rules for Very Small Aperture Terminal (VSAT) Networks. VSAT networks are networks of technically identical small antennas that generally communicate with a larger hub station. The networks operate in the 12/14 GHz frequency bands. We proposed to eliminate the requirement that a VSAT applicant complete construction of its network within forty-eight months of the date we grant, and instead, permit VSAT licensees to complete construction over the course of their ten-year license term. We stated that the current requirement, adopted in 1986, was designed to monitor the construction of VSAT antennas.[34] However, experience since 1986 has shown that VSAT licensees have aggressively constructed their networks within four years of receiving a license, but often require more than four years to complete construction of the entire network. Given the development of the VSAT service, it appears unnecessary to retain the four-year construction deadline. In addition, eliminating this requirement will permit operators greater flexibility in their financial and construction planning.

27. We also proposed amending Section 25.134 to require that licensees specify the number of VSAT stations constructed only when applying to renew their licenses (FCC Form 405), rather than annually as is now required. We stated that the VSAT industry has matured to a point where it is no longer necessary to monitor system build-out on a yearly basis. Requiring licensees to provide the number of stations installed only once every ten years in their license renewal applications will allow us to continue to track the growth of the industry while imposing less of a burden on licensees. All commenters agree, and we will change our rule accordingly. MCI, however, proposed that we require licensees to file an annual report detailing new VSAT stations placed in operation.[35] We will not adopt such a requirement because MCI has not presented us with any compelling reason why this information is

[33] Comments of MCI at p. 4.

[34] In the Matter of Routine Licensing of Large Networks of Small Antenna Earth Stations Operating in the 12/14 GHz Frequency Bands, Declaratory Order, (released April 9, 1986) ("VSAT Order").

[35] Comments of MCI at p. 6.

needed. Indeed, licensees generally place stations into operation as soon as they are constructed, and we see no need to require construction information on an annual basis.

28. We also proposed removing Section 25.115(c)(1) and (c)(5) of our rules, which require VSAT network applicants to include a general narrative section describing the proposed system and to designate a point of contact where records of location and frequency use are maintained. The current application form, FCC Form 493, also requests this information. Therefore, Sections 25.115(c)(1) and (c)(5) are redundant. All commenters support our proposal to eliminate this redundancy. Accordingly, we will remove Section 25.115(c)(1) and (c)(5) from our rules, but will retain this information on the application form.

29. Also included in the Notice were several proposed technical amendments to Section 25.134 of our rules, designed to ensure consistency with authorization criteria for VSAT networks.[36] We received no objection to these proposed changes. However, Hughes Network Systems, Inc. ("HNS") requested that we specify that the 78.3 dBW EIRP density limits are designed to apply on a per carrier basis independent of the bandwidth of the carrier.[37] We have always considered this limit to apply as an aggregate limit rather than a per carrier limit as requested by Hughes. Accordingly, we decline to adopt Hughes' requested clarification. We note, however, that this value was developed over 10 years ago, and if it is appropriate to revise this, we will do so in a future rulemaking. AT&T requested that Section 25.134 specify that EIRP density limits are to be met over the entire service area.[38] The EIRP density limits as stipulated in the original VSAT Order calling for the limits to be "within the service area."[39] Section 25.134 is clear in that it is the maximum EIRP power density that determines whether the application will be processed routinely. Accordingly, any applications for systems that exceed the maximums specified in Section 25.134 anywhere within the satellite footprint must provide supplemental engineering analysis as specified in Section 25.134 of the rules.

30. In its comments, GE requested that we allow short tests of experimental antennas to be conducted after notification, similar to that done by C-band transportables earth station operators, rather than by requiring authorization.[40] We will not do this. C-band transportable operators use the notification process to alert terrestrial operators of planned

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[36] VSAT Order.

[37] Comments of HNS at p. 4.

[38] Comments of AT&T at p. 8.

[39] VSAT Order.

[40] Comments of GE Americom at p. 15.

operations only after a license has been granted for the station. Thus, in that case, we have determined that the earth station complies with all technical requirements in Part 25 and that it can be operated without interference to other stations operating in the band. We have no such assurances with respect to unlicensed experimental stations, even if the test is short in duration. We will therefore require operators of experimental earth stations, as we do all other operators of transmitting antennas, to obtain a license before beginning to operate.

31 In addition, several commenters suggested that we revisit the technical requirements and parameters for VSAT service in general. For example, within their filed comments, respondents raised other salient issues concerning power density standards, antenna characteristics and interference. While a widescale revision of VSAT antenna standards is beyond the scope of this rulemaking, we agree that in light of the rapid development of VSAT technology, a comprehensive review is needed. We will address these issues in a future rulemaking.

3. Eliminating the Requirement for Prior Authorization for Minor Earth Station Modifications

32. Currently, licensees must receive authorization before they can make any modification to licensed facilities. We proposed in the Notice to limit the requirement for prior authorization to "major" changes to an existing earth station, which has the potential to increase interference to adjacent satellites. We proposed to allow licensees to make minor modifications without prior authorization. In Section 25.118, we classified as "minor" all modifications that do not involve: (1) an increase in EIRP or EIRP density (both main lobe and side lobe); (2) an increase in transmitted power; (3) a change in coordinates of more than 1 second for earth stations operating in C-band or at 10.95 to 11.7 GHz; (4) a change in coordinates of ten seconds or greater for stations operating in Ku-band; or (5) an addition to an antenna facility that is already licensed, except for VSAT remote terminals. We proposed to require licensees making "minor" modifications to notify us by using Form 312 within thirty days after the modifications are completed.

33. These proposals generated several comments. First, Comsearch urged that the criteria for determining whether a modification is "major" or "minor" should be the same for both C-band and Ku-band operations.[41] We do not agree. Whether a modification is "major" or "minor" should depend on its potential to cause interference to other operators. Satellite operators and terrestrial licensees operate in the C-band on a shared co-primary basis.[42] Ku-band (12/14 GHz), in contrast, is used by the satellite service only on a primary basis. Consequently, a change in a C-band station has greater potential to affect existing operators

[41] Comments of Comsearch at p. 4.

[42] See 47 C.F.R. § 2.106, Table of Allocations.

than do changes to stations in the Ku-band. We therefore believe different criteria are appropriate for C-band and Ku-band earth station modifications, as reflected in our proposed rule.

34. EDS Corporation ("EDS") requested a clarification of what constitutes a "major" change to antenna facilities under our proposed Section 25.118(c)(5).[43] We believe proposed Section 25.118(a) adequately addresses this question by providing that electrically identical equipment may be replaced without prior authorization or notification. GE suggests that earth station licensees seeking to change their status from common carrier to private be permitted to do so without prior approval.[44] We disagree. We believe common carrier customers and potential customers should be alerted to any change in status and be given an opportunity to comment before service is terminated. We will, however, adopt our proposal to allow operators to change their status from private to common carrier without prior approval. In these circumstances, the obligations of the service provider to its customer is subject to the terms and conditions of their contract, and does not require Commission involvement.

35. HNS offered three specific clarifications to our proposed Section 25.118 regarding our proposed system of notification and authorization.[45] First, HNS requested clarification as to whether *no* notification or *no prior* notification would be required for electrically identical replacements. Second, HNS requested that Section 25.118(c)(1) be amended to reflect that an increase in EIRP density requires prior authorization and that an increase in EIRP or transmitter power requires only subsequent notification. Third, HNS questioned whether our proposed language is intended to apply solely to individual VSAT antennas or also to hub earth stations. HNS argues that we should clarify our proposed Section 25.118(c)(5) to require prior authorization only for "changes or alterations to hub earth stations that result in an increase in EIRP density or an increase in side lobe power in the direction of a neighboring satellite."[46]

36. We examined these concerns and have adopted HNS's clarifying language as proposed for the first and second issues raised above. We have examined HNS's proposals and will adopt the first proposal. Accordingly, we will clarify Section 25.118, 47 C.F.R. § 25.118, to require that the licensee notify us within thirty days after replacing its equipment with electrically identical equipment. We reject HNS's second proposal. We will require

[43] Comments of EDS at p. 5.

[44] Comments of GE Americom at p. 15.

[45] Comments of HNS at p. 5.

[46] Comments of HNS at p. 7.

prior Commission authorization if licensees increase EIRP, EIRP density, or transmitter power to facilitate interference-free operations in a two degree spacing environment. With respect to Section 25.118(c)(5), we clarify that "a change or addition to antenna facilities" includes, for a VSAT network, both hub stations and remote terminals. We reject HNS's proposal to limit the term antenna facilities to hub stations. To avoid potential interference, we will still require prior authorization of any change or addition to antenna facilities, including both hub stations and remote terminals.

37. MCI suggested that our proposal to distinguish as a major modification, any change in coordinates of ten seconds or greater for earth stations operating in the Ku-band is unreasonable.[47] It seems that MCI's comment is misplaced. We recognized that there is no earth station coordination requirement since the fixed-satellite service is exclusively primary in the 12/14 band. The ten second limit is intended to bound the orderly implementation of earth stations in the Ku band. Furthermore, this ten-second limit is consistent policy that is embedded in other FCC regulations, e.g., Part 21. Motorola agreed with our rationale that requesting prior authority for changes that, by definition, have no substantial impact on other operators is not useful. Motorola requested further that the Commission extend some version of our "minor" modifications to space stations as well as permit operators to proceed with changes in construction or operation of these stations without the extra step of obtaining Commission authority.[48] We agree this idea is potentially feasible. However, lacking specific language and policy justification for defining exactly what the nature of "minor" may be in this instance, we defer this issue to a later time. Finally, Orbital Sciences Corporation ("Orbital") claimed that it is unnecessary even to notify the Commission regarding "minor" modifications to an earth station. Orbital believes notifications could be accomplished by marking such changes in technical logbooks rather than notifying the Commission.[49] We conclude that notification to the Commission, rather than logbook notations, is essential, given that even minor changes have a cumulative effect that will be important to document over the long term.

4. Earth Station Bandwidth Limitations

38. To license earth stations as quickly as possible, we have developed a set of technical parameters by which we determine whether the station can be routinely licensed. These parameters generally involve transmitter power density limits relative to antenna size and operating band. For digital carriers operating in the C and Ku-bands, however, we also

[47] Comments of MCI at p. 4.

[48] Comments of Motorola at p. 8.

[49] Comments of Orbital at p. 5.

impose a bandwidth limitation.[50] When we adopted these standards in 1985, all applicants using small earth station antennas had proposed to use narrowband transmission carriers. In the last few years, however, we have received an increasing number of applications from prospective VSAT and other earth station operators to use wideband digital carriers. We have acted on these on a case-by-case basis. We have found that permitting these wider-bandwidth digital carriers has not caused objectionable interference to adjacent satellite operators and has given licensees the flexibility to tailor their offerings to best serve their customers. Consequently, in the Notice we proposed to eliminate the bandwidth limitation for digital VSAT carriers and announced that we will not impose bandwidth limitations on narrow and wide bandwidth digital carriers. In order to protect existing and future VSAT operations from interference and to ensure that all digital carriers operate compatibly, we proposed to extend the existing power density limits for digital VSAT carriers to all digital carriers in the C and Ku-bands.

39. In general, commenters support our proposal regarding bandwidth limitations. Several, however, raise concerns regarding our proposal to extend narrowband digital power density limits to other digital carriers. EDS, for example, states that certain wideband digital carriers, such as video carriers, do not provide both inbound and outbound services to and from the customer, as VSAT networks do. EDS argues that these one-way services should not be subject to restrictions designed to reduce interference in two-way VSAT networks.[51] EDS's contentions are misplaced. In the case of one-way service, the transmission link has the same interference potential regardless of whether the signal is being transmitted to a customer that is only capable of receiving the signal, such as a viewer receiving direct-to-home video service, or to a customer that can send subsequent transmissions. In addition, AT&T, HNS and Orion urge us to retain the flexibility to authorize stations using higher power densities than those meeting the VSAT standard.[52] We agree. The VSAT standard we adopt here is designed to permit the routine licensing of certain earth stations. We will continue to evaluate on a case-by-case basis, and would favorably consider, proposals that meet our two degree spacing requirements. We will not now extend routine licensing to antennas smaller than 1.2 meters in diameter at the Ku-band.[53] At this time, there is insufficient data to apply routine licensing to these antennas. Antennas smaller than 1.2 meters may cause interference in a two-degree spacing environment. We will consider these

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[50] Routine Licensing of Earth Stations in the 6 GHz Band Using Antennas Less than 9 Meters in Diameter for Narrowband Transmissions, Declaratory Order, (released September 25, 1985); see also In the Matter of Routine Licensing of Large Networks of Small Antenna Earth Stations Operating in the 12/14 GHz Frequency Bands, Declaratory Order, (released April 9, 1986) ("VSAT Order").

[51] See Comments of EDS at p. 5 .

[52] See Comments of AT&T at p.12; Comments of HNS at p.8; Comments of Orion at p.4.

[53] See Comments of AT&T at p.13.

issues in a future rulemaking. Motorola requested that we not extend the VSAT standard to the 28 GHz Ka- band.[54] It was not our intention to do so in this proceeding. We will consider criteria for routine licensing of earth stations in the Ka-band in the context of licensing for that band.

C. General Proposals

1. FCC Forms

40. In our Notice, we proposed to consolidate and simplify our forms by adopting a new multi-part form consisting of a main form and several schedules,[55] in lieu of FCC Forms 430 (Licensee Qualification Report), 493 (Application for Earth Station Authorization or for Modification of Station License), 702 (Application for Consent to Assignment of Radio Station Construction Permit or License for Stations in Services Other than Broadcast), and 704 (Application for Consent to Transfer of Control). This change would allow an applicant to use just one form and selected schedules rather than many different forms that may request unnecessary or redundant information.

41. The commenters generally support our approach. Comsearch suggests, however, that the new form should not allow applicants to continue to designate simply "ALSAT" -- or all U.S.-licensed satellites -- as the points of communication, as the current Form 493 allows them to do. Rather Comsearch asserts that the applicants should provide the range of orbital locations for the geostationary satellites to be accessed from a particular earth station.[56] Comsearch maintains that without specific orbit position data, terrestrial systems proposed in the shared 4/6 GHz band would need to assume that every earth station was operating with all U.S. satellites -- even when it is, in fact, operating only within a small portion of the orbital arc occupied by U.S. satellites. According to Comsearch, this could prevent a terrestrial station from being licensed on grounds of interference when no interference would actually occur, resulting in inefficient spectrum use.

42. We allow applicants to use the designation "ALSAT" to provide them with the flexibility to access a variety of satellites without the delays associated with obtaining additional regulatory approval to do so. Moreover, both the current Form 493 and the proposed Form 312 require that earth station applicants also provide the eastern and western

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[54] See Comments of Motorola at p. 9.

[55] See Appendix C. The new form will consist of a Main Form (312) with two additional schedules, A and B. We have merged the originally-proposed schedule C with the current Schedule B to allow for a more streamlined application process. The proposed form with its attached schedules is similar in format to the recently adopted FCC Form 600 being used by the Wireless Bureau.

[56] Comments of Comsearch at p. 7.

points of the orbital arc they seek to access. To further facilitate the frequency coordination process, we will retain in the proposed FCC Form 312 (Schedule B), the request for orbital information contained in Item 12 of the FCC Form 493. This appears to address Comsearch's concerns.

43. EDS requested several clarifications of the data requested on the new form.[57] In response, we first clarify that in the instructions for item 20 ("Nature of Service"), the term "fixed satellite service" applies only to a satellite service using earth stations operating from fixed locations. "Mobile satellite service" refers to a service using earth stations that operate while they are moving. Second, we make a minor change to the form to reflect that not all "temporary-fixed" earth stations are satellite news-gathering stations, as we have implied in Items 23(2) and 24(F). We will continue to require non-common carriers to provide the foreign ownership information requested in items 26 through 31. This will allow us to monitor this information for all licensed telecommunications providers. In addition, our proposed new form does not eliminate the requirement that both common carrier and non-common carrier earth and space station licensees must file an updated version of Form 312 (main form) whenever there are changes to a licensee's financial and legal qualifications.

44. We do not agree with HNS's suggestion that we eliminate proposed Schedules B and C, items B15, B16, B18, C13, C14, and C16 requesting data identifying the maximum EIRP, EIRP density and total EIRP.[58] HNS suggests that this information may not be necessary to our evaluation of an applicant's interference analysis. The EIRP and EIRP density are, however, fundamental to any interference analysis, and the total EIRP ensures compliance with our current radiation hazard standards. Motorola suggested that we expand Form 312 so that once completed, it would constitute an acceptable satellite application.[59] Our proposal envisions space station applicants submitting ownership information on Form 312, with a separate application in narrative form, attached. While Motorola's suggestion has merit, it would make Form 312 overly cumbersome. For example, Section 25.114 lists twenty-seven items of information required in a space station application some of which applies only to certain services. Most of these questions require detailed technical analysis or narrative responses regarding business plans. Therefore, including space station requirements in Form 312 would cause unnecessary confusion. To assist prospective space station applicants in preparing the required information, we will modify the instruction sheet for the new form to make the filing requirements for space station applications more clear.

45. Orion Network Systems, Inc. ("Orion") advocated that we eliminate the

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[57] Comments of EDS at p. 7.

[58] Comments of HNS at p. 9.

[59] See Comments of Motorola at p. 6.

licensing requirements of Section 25.131(j) for receive-only earth stations operating with both non-U.S. space stations and U.S. space stations for the reception of service from foreign countries. These earth stations, according to Orion, should be subject to the registration process we apply to domestic receive-only earth stations.[60] The regulatory treatment of these various receive-only earth stations is addressed in the context of the DISCO II Notice of Proposed Rulemaking, adopted May 9, 1996. In DISCO II, we proposed eliminating the licensing requirement for receive-only earth stations operating with U.S.-licensed FSS satellite systems for the reception of services from other countries. We will take into account Orion's suggestions as we consider comments filed in this proceeding.

46. LQP recommended two revisions to proposed Form 312.[61] First, it suggested we revise the language in Item 32 to correct an unintended ambiguity. As proposed, the form asks whether the application "is inconsistent with any of the Commission Rules" and asks the applicant to attach exhibits justifying any waiver request or rule exemption. LQP believes this question may be interpreted as requesting a broader inquiry from applicants answering "no" than applicants answering "yes." LPQ suggests modifying the question to determine whether the applicant requests any waivers or exemptions of the Commission's rules and if the applicant does, to attach the relevant requests and supporting documents. We will clarify Item 32 accordingly. Second, LQP asked that we eliminate as unnecessary Item 39, which asks whether the transferee/assignee holds any obligations of the licensee corporation. We agree that this information is not necessary to our determination in an assignment/transfer application. Therefore, Item 39 is deleted. AT&T and GE recommended[62] we make the software for Form 312 and the related schedules electronically available to the public. We are in the course of developing the necessary software to effectuate the filing of Form 312 by diskette. Once that process is completed, we will advise the public and initiate limited use of the software for testing. Once testing is completed, we expect to allow the public to file their Form 312 by the prescribed computer diskette. Applicants who are not able to file electronically may opt to file a paper copy of Form 312. Ultimately, we anticipate implementing a process of full electronic filing in which the public will not need to file a diskette or a paper copy, and instead may electronically transmit the forms to us for filing. Given the processing efficiencies associated with electronic filing, we encourage all applicants to consider its future use.

47. We also proposed to combine the information requested in assignment and transfer applications (FCC Forms 702 and 704) into one schedule. We proposed amending Section 25.118(f) of our rules to require that parties notify the Commission by letter, within

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[60] Comments of Orion at p.2.

[61] See Comments of LQP at p. 9.

[62] Comments of AT&T at p.13; Comments of General Electric at p. 16.

thirty days of the consummation of a transfer or assignment, of the date of consummation and the file number of the applications involved in the transaction. While we currently require parties to notify us of the consummation of an assignment or transfer, we do not in our rules specify a timeframe during which notification must occur.[63] All parties agreed with this proposal. Accordingly, we adopt this proposal and revise section 25.118(f).

2. Interference Analysis in the C, Ka, and Ku, Bands

48. In our Notice, we proposed adopting a computer program known as ASIA (Adjacent Satellite Interference Analysis)[64] as the standard program for analyzing interference potential in a two degree orbital spacing environment for VSATs as well as other systems. ASIA is widely used in the industry to analyze the compatibility of adjacent space stations. The ASIA program is commonly used with regard to earth station applications. Although this analysis is not required in an earth station application, we rely on the program to determine whether to license an earth station that does not fall within the Part 25 parameters for routine licensing.

49. In order to use ASIA, a current "database" is required. The database that we have used for our own ASIA analyses was last updated in 1986. With the use of new technology and shifts in the telecommunications market over the last decade, older satellite systems and services are becoming obsolete and should be removed from the database. Likewise, newly-emerging satellite systems should be added to the database. To update the database, we asked operators of GSO space stations and earth stations operating with those space stations to provide us, on a voluntary basis, with a diskette containing the characteristics of their satellite network in a format consistent with the ASIA program.[65]

50. In response, Hughes and Orion assert that ASIA has not been proven to be the best standard for interference analysis.[66] We note that in 1985, the Reduced Orbital Spacings Advisory Committee, comprising both government and industry representatives, pronounced

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[63] See 47 C.F.R. § 25.118(f).

[64] George Sharp, Reduced Domestic Satellite Orbital Spacings at 4/6 GHz, FCC, Office of Science and Technology, Technical Analysis Division, Report FCC/OST R83-2, May 1983.

[65] The following diskette formats can be read at the FCC: MS-DOS compatible floppy diskette, either 3-1/2 or 5-1/4 and either DS/DD or DS/HD.

[66] See Comments of Hughes at p. 7; Comments of Orion at p. 5.

ASIA as the generally accepted procedure for calculating adjacent satellite interference.[67] However, we would also permit licensees or applicants to use their own interference analysis programs, provided that the program is made available to the Commission and the public for review. GE is concerned that some of the information to be included in the updated data base may be confidential, such as a new emission designator. We agree that proprietary information should be protected. Consequently, we will create an aggregate ("transparent") database so that specific technical data is not able to be matched to a particular company. Orbital Sciences expressed interest in using the ASIA program for low-earth orbit satellites. We note, however, that this program does not apply to non-geostationary satellites.[68] Finally, we agree with MCI that the public should be able to access this data. We will make the database and software available through the Reference Center of the International Bureau and on the Internet.[69]

3. Eliminating Developmental Operation Rules

51. In the Notice, we proposed to eliminate Subpart E, concerning developmental operations, from Part 25. We stated that a developmental authorization appears tantamount to an experimental authorization issued by the Office of Engineering and Technology ("OET"). We suggested that a better and more consistent policy would result by having a single office handle all such requests. We also proposed to redesignate Section 25.308, which is now included in Subpart E, although it does not concern developmental operations, as Section 25.281. Because this rule involves Automatic Transmitter Identification Systems for satellite uplink stations carrying broadband video information, we think it belongs in Subpart D, Technical Operations. The only objection came from Motorola, which believes that the International Bureau staff may be better suited to consider satellite radio services than other bureaus or offices at the Commission.[70] We believe that the rule, as drafted, reflects the best pairing of staff expertise with policy issues within the Commission. However, OET will coordinate with the International Bureau and confirm that the development operations are compatible with authorized services in the selected bands.

4. Eliminating Rules Detailing Appendix 28

52. In our initial Notice, we proposed to amend Section 25.251 and to eliminate

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[67] See "Report of the Advisory Committee for the Implementation of Reduced Orbital Spacings Between U.S. Domestic Fixed Satellites to the Federal Communications Commission" Phase One Report, Advisory Committee on Reduced Orbital Spacings, September, 1985.

[68] Comments of Orbital at p. 6.

[69] Comments of MCI at p. 5.

[70] Comments of Motorola at p. 4.

Sections 25.252-25.256 of our rules detailing the international coordination procedures contained in Appendix 28 of the ITU Radio Regulations. Because Appendix 28 is amended so frequently by the ITU and our rules become outdated very quickly, we proposed to simply reference ITU Appendix 28 in Section 25.251 of our rules and to place a current version of Appendix 28 in our Reference Room. However, since publication of the Notice, we have re-examined this proposal and have concluded that Section 25.251, which provides specific requirements for coordination between terrestrial systems and earth stations, should be retained in its entirety.

53. Commenters agree with our proposal to reference Appendix 28 instead of reciting it in our rules. They also suggest that the Internet be used as a tool for distributing current versions of Appendix 28 and any new coordination procedures referenced in Part 25.[71] We agree that this mode of electronic data dissemination would be efficient. Because Appendix 28 is copyrighted material, however, our distribution must be consistent with intellectual property laws. To the extent we can legally do so, we will use the Internet and our new Home Page on the World Wide Web to disseminate this information. Also, the FCC's International Bureau Reference Room will have available other timely information related to satellite coordination and ITU-related materials.

5. Field Office Change

54. The Operations Center in Columbia, Maryland, has replaced the Commission's Laurel field office. Therefore, we proposed to amend Sections 25.119(a), 25.142(c), 25.143(e)(1), 25.210(j), 25.272(b), 25. 274(f) of our rules to refer to the Columbia Operations Center. We received no objections and will adopt these rule changes as proposed.

6. Protection for Global Positioning System (GPS)

55. In November 1994, the Commission, the National Telecommunications and Information Administration (NTIA), and the Federal Aviation Administration (FAA) signed a memorandum of understanding (MOU) that will culminate in technical standards permitting both Mobile-Satellite Service (MSS) systems and a global navigational satellite system (GNSS) to operate compatibly in the bands below 1605 MHz.[72] Under the MOU, RTCA, Inc.

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[71] See Comments of Comsearch at p. 6; Comments of Orbital at p. 6.

[72] The relevant MSS service is limited to allocations near the 1.5 GHz band. We have adopted out-of-band emission limits for MSS earth terminals in 1610-1626.5 MHz band to protect GPS. We have also applied these same out-of-band emission levels to mobile earth terminal applications using the domestic MSS spectrum. See Amendment of Parts 2, 22, and 25 of the Commission's Rules to Allocate Spectrum for and Establish Rules Pertaining to the Use of Radio Frequencies in Land Mobile Satellite Service, Memorandum Opinion and Order, 4 F.C.C. Rcd. 6041 (1989); Amendment of Parts 2, 22, and 25 of the Commission's Rules to Allocate Spectrum for and Establish Rules Pertaining to the Use of Radio Frequencies in Land

will develop out-of-band emission standards for MSS user transmissions to protect GNSS receivers and, upon completion, will submit a final report to the FAA and the Commission containing its recommendations. It is our understanding that the RTCA Working Group 6 is evaluating proposals for out-of-band emission limits to protect the Global Positioning System (GPS) and GLONASS components of GNSS.[73] In our Notice, we indicated that we will propose adopting RTCA's recommendations once they are filed. Several commenters strongly object to any Commission action on this matter without a separate NPRM.[74] We did not intend in the Notice to adopt RTCA's recommendations without public comment. We will initiate a separate NPRM on this subject after receiving and evaluating the RTCA's recommendations. We therefore take no action at this time.

7. Technical Operation of Satellites

56. In its comments, Motorola proposes three additional changes concerning the technical operation of satellites. It claims these modifications will better reflect the operational differences between LEO and GSO satellite systems. First, Motorola urges us to change Section 25.204(e) so that the power limit for non-geostationary earth stations transmitting to space stations operating below 2000 kilometers in altitude may exceed the specified up-link EIRP for operations at above 10 GHz in certain situations.[75] Motorola is apparently concerned about the feeder link operations of its authorized LEO system, which will operate with feeder links in the 28 GHz band. We will evaluate Motorola's proposal in the context of our 28 GHz rulemaking proceeding.[76]

57. Second, Motorola requests that we adjust the spectral emission limits in Section 25.202(f) of the rules.[77] Motorola argues that the rule was adopted at a time when only analog transmissions were in use. With the growing use of digital systems, Motorola asserts we must adjust the rule to protect adjacent systems from harmful interference. We agree that

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Mobile Satellite Service, Final Decision on Remand, 7 F.C.C. Rcd. 266 (1992) aff'd sub nom., Aeronautical Radio Inc. v. FCC, 983 F.2d 75 (1993); Application of Rockwell International Corporation for Blanket License for 15,000 Mobile Earth Stations, 7 F.C.C. Rcd. 942 (1992).

[73] The RTCA Working Group is also examining out-of-band emission limits necessary to protect GLONASS, a component of GNSS. However, actual numbers have not yet been developed.

[74] See Comments of HNS at p. 10; Comments of LQP at p. 12.

[75] Comments of Motorola at p. 9.

[76] Rulemaking to Amend Parts 1, 2, 21, and 25 to Establish Rules and Policies for Local and Multipoint Distribution Service and for Fixed Satellite Services, First Report and Order and Fourth Notice of Proposed Rulemaking, FCC 96-311, CC Docket No. 92-297, 61 Fed. Reg. 39425 (released July 22, 1996).

[77] Id. at p. 10.

the rule should be updated to reflect current technology. Motorola, however, has not provided any specific proposals nor does the record contain any technical information on which to base a rule change. We would consider specific suggestions in a future proceeding.

58. Last, Motorola asks us to clarify that our antenna performance rules apply only to GSO operations and to determine what standards should apply to NGSO earth stations.[78] We affirm that these rules apply only to GSO operations. However, we do not have a record on the standards that should apply to NGSO earth station. A separate proceeding will be necessary to examine this matter.

IV. CONCLUSION

59. This Report and Order streamlines regulatory requirements to facilitate licensing of new satellite systems and services consistent with the public interest. We have eliminated outmoded data collection and duplicative paperwork requirements. These changes will help consumers by helping satellite operators who must satisfy real-time consumer demand in a global market. The changes we are making are intended to enhance the growth and development of the U.S. satellite industry as it continues to compete with other national and international telecommunications providers.[79]

60. In addition, this rule-making reflects a collaborative approach to reinventing a classic regulatory structure. Prior to issuing the Notice in this proceeding and this Report and Order, Commission staff worked closely with interested industry members to analyze in detail each administrative and technical aspect of the FCC's Part 25 rules governing satellite application and licensing procedures. This proceeding has built upon these suggestions and proposed initiatives that balanced industry concerns with the Commission's public policy goals. Thus, our final rules reflect both the valuable experience of the private sector and the best intent of government in creating a more efficient, consistent regulatory process.

V. ORDERING CLAUSES

61. Accordingly, IT IS ORDERED that Part 25 of the Commission's rules, 47 C.F.R. Part 25, the Commission's forms, and the Commission's policies are amended as specified in this Report and Order.

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[78] Id. at p. 12.

[79] By reducing regulatory burden, these streamlining measures eliminate some market entry barriers and facilitate the participation of small businesses in the communications marketplace. See Section 257 of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996).